

REMARKS

A. STATUS OF THE CLAIMS

Claims 1-24 have been cancelled without prejudice or disclaimer. New claims 25-65, which correspond to claims 25-65 in the parent application, no. 09/319,165, have been added. Support can be found throughout the specification and claims as originally filed. No new matter has been added.

B. REJECTIONS UNDER 35 U.S.C. § 103

In the parent application, no. 09/319,165, claims 25-49 and 51-57 were rejected under 35 U.S.C. § 103(a) over Yamahatsu (EP 716,846) in view of Andrillon (U.S. Pat. No. 4,065,255), and claims 25-65 were rejected under § 103(a) over Andrillon in view of Tsujino (U.S. Pat. No. 4,961,925).

Applicants respectfully traverse these rejections based on the presentation herewith of the Declaration of Grégory PLOS, which contains the results of comparative testing and demonstrates unexpected and superior properties of compositions according to the presently claimed invention as compared with those according to Yamahatsu and Andrillon.

1. Yamahatsu in view of Andrillon

The Examiner has argued that it would have been obvious to substitute the m-aminophenol coupler in Yamahatsu's exemplified compositions with 2-methyl-5-N- β -hydroxyethylamino-phenol because Yamahatsu teaches the equivalence between these couplers and Andrillon teaches improved storage for 2-methyl-5-N- β -hydroxyethylamino-phenol compositions. According to the Examiner, there would be

further motivation because Andrillon teaches that improved fastness of 2-methyl-5-N- β -hydroxyethylamino-phenol compositions. (See, e.g., parent application no. 09/319,165 Office Action of May 5, 2000, at 6-7.) Thus, the Examiner argued that (1) Yamahatsu teaches the equivalence between 2-methyl-5-N-(b -hydroxyethyl)amino phenol and m-aminophenol couplers, and (2) Andrillon teaches improved fastness for 2-methyl-5-N- β -hydroxyethylamino-phenol for compositions. (See *id.*)

In contrast to the alleged expectation of equivalence (with improved fastness), the evidence presented according to the PLOS Declaration shows non-equivalence, with the composition comprising 2-methyl-5-N-(b -hydroxyethyl)amino phenol providing superior results. As set forth in the PLOS Declaration, comparative testing was performed with inventive composition **B**, containing 2-methyl-5-N-(b -hydroxyethyl)amino phenol as a coupler, and comparative composition **A**, which corresponds to a similar composition according to Yamahatsu but containing m-aminophenol as a coupler. The results of this comparative testing show that inventive composition **B** is unexpectedly superior to comparative composition **A**. In particular, according to the PLOS Declaration, the present invention provides a coloration in both natural and permed hair that is more chromatic than obtained with the composition according to Yamahatsu.

According to Mr. PLOS, who has education and experience in the area of hair dyeing and compositions for the treatment of hair, these results would not have been predictable based on the sole difference between the compositions being the use of m-aminophenol as a coupler in composition **A** compared with the use of 2-methyl 5-N-(β -hydroxyethyl)amino phenol as a coupler according to composition **B**. As set forth in

the PLOS Declaration, the results have statistical significance, and the differences between the a*, b*, and c* values are greater than the known error according to the above-described color determination method. Further, the results are also of practical significance, as greater chromaticity in both natural and permed hair is a desirable and useful characteristic for a hair dyeing composition or method.

2. Andrillon in view of those of Tsujino

The Examiner has argued that it would have been obvious to substitute the hydrogen peroxide oxidant of Andrillon with an enzyme/donor oxidizing system because Tsujino teaches that when enzymes and donors are used in place of oxidants such as hydrogen peroxide there is decreased skin irritation and decreased damage to the hair and skin are obtained. (See, e.g., parent application no. 09/319,165 Office Action of May 5, 2000, at 5.) Thus, the Examiner has argued that according to Tsujino, the proposed combination would have the expected property of reduced skin and hair irritation and damage. (*Id.*) The rejection is not based on, and there is no evidence of record teaching or suggesting, an expectation that replacing the hydrogen peroxide in Andrillon with a uricase/uric acid system according to Tsujino would affect other hair dyeing properties.

However, as set forth in the PLOS Declaration, comparative testing was performed with inventive composition **D**, comprising the 2-electron oxidoreductase enzyme uricase, and comparative composition **C**, which corresponds to a composition according to Andrillon and contains hydrogen peroxide as an oxidant. The results of this comparative testing show that inventive composition **D** is unexpectedly superior to comparative composition **C**. In particular, the PLOS Declaration shows increased

chromaticity and the beneficial property of decreased selectivity for a composition containing uricase/uric acid according to the present invention as compared with an otherwise identical composition according to Andrillon containing hydrogen peroxide as an oxidant.

The results of the color determination show that a composition according to the present invention (composition **D**) provides a coloration that is more chromatic than obtained with the composition according to Andrillon, US 4,065,255 (composition **C**).

The results of the color variation determination show that a composition according to the present invention (composition **D**) provides a coloration that is less selective than obtained with the composition according to Andrillon.

Mr. PLOS explains in his Declaration that, based on his education and experience, particularly in the area of hair dyeing and compositions for the treatment of hair, these results would not have been predictable based on the sole difference between the compositions being the use of hydrogen peroxide as an oxidant in composition **C** compared with the use of the 2-electron oxidoreductase enzyme uricase as oxidant according to composition **D**. Further, the results have statistical significance, and the differences between the a^* , b^* , and c^* values and ΔE are greater than the known error according to the above-described color and selectivity determination methods. As also explained, the results are also of practical significance, as greater chromaticity and reduced selectivity are desirable and useful characteristics for a hair dyeing composition or method.

3. Conclusion with respect to rejection under 35 U.S.C. § 103

As explained in the MPEP, an obviousness rejection is properly rebutted with evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art. MPEP § 716.02; *see also In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987); *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). In the present case, there is evidence of unobvious and unexpected advantages to the claimed invention to rebut the rejections of record.

In particular, the premise of the rejection in the parent application over Yamahatsu in view of Andrillon was that the couplers would be equivalent (with improved fastness) (*see, e.g.*, Office Action of May 5, 2000 at 6-7), while the results presented in the PLOS Declaration show superior chromaticity on both natural and permed hair, for the inventive composition compared with that containing a coupler according to Yamahatsu.

Similarly, the premise of the rejection over Andrillon in view of Tsujino was that there would be the expectation of decreased skin irritation and decreased damage to the hair and skin using Tsujino's enzymatic system. (*See, e.g.*, Office Action of May 5, 2000, at 5.) Nowhere in the record is there any indication that the use of an enzymatic system in a composition according to Andrillon would result in improved coloration properties. However, the results presented in the PLOS declaration show superior chromaticity and the beneficial properties of decreased selectivity in a composition according to the present invention comprising a uricase/uric acid oxidizing system as

compared with an otherwise identical composition according to Andrillon that comprises hydrogen peroxide as an oxidant.

Accordingly, reconsideration and withdrawal of the previous rejections under section 103 are respectfully requested.

CONCLUSION


For the foregoing reasons, Applicants respectfully submit that the claims 25-65 are in condition for allowance.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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